

Identifying New Research Questions

After students have completed the carbon field measurements and analysis, and had the chance to share their findings and conclusions, it is important for them to experience the complete scientific research cycle by identifying new research questions that have arisen as a product of their research. These questions can be shared as part of their discussion or as an avenue to begin new research investigations. The *Classroom Inquiry and Student Research* (on the GLOBE Carbon Cycle webpage under Resources — Scientific Process) document uses these questions as a guide:

- Through the investigations and results analysis, did any new questions develop out of the original research question?
- Are any of these questions substantial enough to lead to new investigations?

Below are example research questions that stem from carbon cycle sample site fieldwork and analysis, along with suggested resources.

Example Research Questions

- How does the uptake of carbon by schoolyard vegetation compare to the emissions of carbon (carbon footprint) by the school?
Resources: Calculating NPP and Carbon Uptake, Carbon Calculators
- How does the biomass and/or carbon storage in my sample site compare to the carbon stored in another location/ecosystem?
Resources: GLOBE Visualization System
- How does the carbon storage I calculated during my fieldwork compare to modeled carbon storage for my biome?
Resources: The Biomass Accumulation Model
- What is the pattern in which biomass/ carbon storage increases over time?
Resources: The Biomass Accumulation Model, Extension 3
- If climate changes how do I expect vegetation & carbon storage to change? Globally? Locally?

Resources: Student Climate Data (studentclimatedata.unh.edu), Tree Atlas (www.nrs.fs.fed.us/atlas/tree)

